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INDUSTRIAL LAND USE STUDY



THE CITY OF HAMILTON PLANNING DEPARTMENT

February, 1973

Item 2 of the 17th Report of the Hamilton Planning Board
adopted by City Council on October 9, 1974.

2. That the policies and recommendations contained in the Industrial Land Use Study dated February, 1973, be adopted.

NOTE: The Industrial Land Use Study Report, as adopted by the Hamilton Planning Board and the Economic Development Commission, was circulated to the Members of Council on June 1, 1973. This resolution is to provide for formal adoption of the policies and recommendations contained in the Report.

CERTIFIED A TRUE COPY

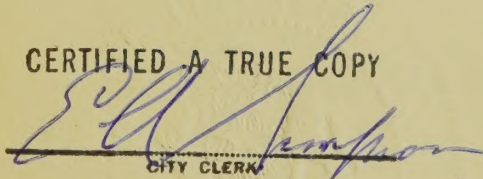

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TABLE OF CONTENTS

PAGES	PAGES
1. INTRODUCTION	1
2. INDUSTRIAL LAND USE STUDY	2
3. EVALUATION OF EXISTING INDUSTRIAL LAND	3
a. Land Use	3
b. Employment	3
c. Land Use and Employment	3
4. BASIC PLANNING AND POLICY	4
5. COMPARING LAND AND EMPLOYMENT	5
6. INDUSTRIAL LAND RECOMMENDATIONS	6
a. Land Use	6
b. Land Use and Employment	6
7. CITY OF HAMILTON PLANNING DEPARTMENT	7
8. FEBRUARY, 1973	8
9. STUDY OF INDUSTRIAL LAND	9
a. Study	9
b. City of Hamilton	9
10. STRATEGY AND POLICY RECOMMENDATIONS	10

TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	1
1. STUDY OBJECTIVES	1
2. CHARACTERISTICS OF EXISTING INDUSTRIAL AREAS	2
a) Distribution	2
b) Employment	6
c) Land Use and Tax Base	11
3. BASIC PROBLEMS - their causes and effects	17
4. COMPARATIVE LAND USE DISTRIBUTION	21
5. INDUSTRIAL LAND REQUIREMENTS	25
a) Lithwick Forecast	25
b) Hamilton Economic Development Commission	26
c) Transportation Study for the City of Hamilton	26
6. INDUSTRIAL LOCATION FACTORS	30
7. STOCK OF INDUSTRIAL LAND	32
a) Hamilton	32
b) Other Municipalities	33
8. STRATEGY AND POLICY RECOMMENDATIONS	39

LIST OF FIGURES

FIGURE NUMBER	TITLE	FOLLOWS PAGE
1.	Distribution of Manufacturing Employment	2
2.	Manufacturing Employment by Planning District - 1968	6
3.	Manufacturing Employment by Category - 1968	6
4.	Hamilton Planning Districts	6
5.	Manufacturing Employment Change 1961 - 1968	9
6.	A Comparison of Existing and Proposed Land Use Distribution Beasley Neighbourhood	12
7.	Redistribution of Existing Industrial and Residential Land Uses, Beasley Neighbourhood	12
8.	A Comparison of Existing and Proposed Industrial and Commercial Land Uses, Beasley Neighbourhood	12
9.	Assessed Valuation by Year, City of Hamilton	12
10.	Relationship of Industrial Area to Population	21
11.	Land Use Areas in Ontario's Urban Municipalities	21
12.	Existing Land Use - City of Hamilton - 1968	21
13.	Industrial Employment - Metro Hamilton (1970-2001)	21
14.	Employment by Type (Year 2001 Metro Hamilton)	26
15.	Industrial Employment (Year 2001 Hamilton City)	26
16.	Key Map of Super Zones	26
17.	Site Disadvantages	29
18.	Advantages of a Hamilton Location	29
19.	Privately Owned Available Industrial Land 1972	32
20.	Current Industrial Land Prices	32

21.	Available Industrial Acreage - Selected Municipalities in Southern Ontario - 1971	32
22.	Land Use Designations	36
23.	Conversion Priority of Residential Enclaves	36
24.	Areas Recommended for Industrial Development	41

INTRODUCTION

In urban areas the relative proportions of land use are constantly changing within modest limits. These proportions become more rigid as municipal development advances. Similarly, the location of the remaining parcels of land becomes increasingly critical, relative to established uses - becoming particularly restrictive for new heavy industry. The City of Hamilton consequently has few alternatives remaining in its acquisition of land for future industrial parks. The end objective of this study is to provide guidelines for a practical working industrial land use policy.

1. STUDY OBJECTIVES

- a) To determine local trends in industrial land use, employment assessment and their causes.
- b) To establish a reasonable proportion of industrial/other land uses.
- c) To forecast future industrial land requirements.
- d) To assist in providing land for industrial use in convenient locations compatible with adjacent uses at an economic market price.
- e) To provide a basis for the development of general municipal land use policy.

2. CHARACTERISTICS OF EXISTING INDUSTRIAL AREAS

a. DISTRIBUTION

The present spatial distribution of manufacturing areas in Hamilton is characterized by relatively large agglomerations of manufacturing uses bordering the Bay Front, along the Queen Elizabeth Highway east of Red Hill Creek, and adjacent to Highway 403 in West Hamilton. Smaller industrial enclaves, intermingled with other uses, are prevalent in the peripheral areas of the C.B.D., and along railway tracks in the Lower City. Principal manufacturing areas, characterized by common functional and physical attributes, are delimited in Figure 1.

Description

The Bay Front

The Bay Front, bounded by the main C.N.R. line, Wellington Street and Parkdale Avenue, is the major area of manufacturing in Hamilton. Over 60% of the total manufacturing employment and more than 70% of the gross manufacturing acreage is concentrated in a 4 square mile area. Five of the largest industries - Stelco, Dofasco, International Harvester, Firestone Tire and Rubber Company and Otis Elevator - employ 45% of the Hamilton manufacturing employment, and are located north of the C.N.R. tracks.

This manufacturing area is generally well served by rail and water transport. However, the road network does not provide the level of service desired by the industry.¹ Particularly, the lack of continuous arterial road connections from the Bay Front to the regional highway system (Hwy. 403, Hwy. 53, Hwy. 20, Hwy. 6, the Q.E.W. and later the Mountain Freeway) is frequently cited by industrialists as a locational constraint.

Vacant land available to incoming manufacturers has been virtually exhausted. Future expansion of the area is therefore dependent on the infilling of water lots in Hamilton Harbour and the conversion of residential enclaves to manufacturing land uses. The lack of space for long term expansion has been a major factor in prompting Stelco and Dofasco to acquire large parcels of land on Lake Erie.

1 Manufacturing Survey, 1969, City of Hamilton, Planning Department

DISTRIBUTION OF MANUFACTURING EMPLOYMENT

Principal Manufacturing Areas

1. Bay Front
2. East Hamilton
3. Central City
4. Barton Street
5. Chedoke Manufacturing Enclave
6. West Hamilton Manufacturing Enclave

Employment Node Locations

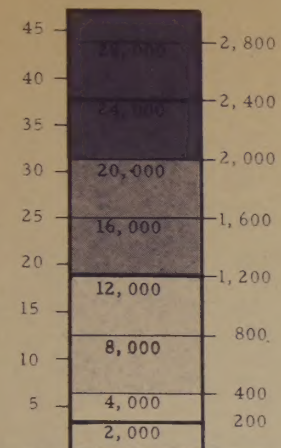
a, b, c, d

LEGEND

Employees per
Gross Acre

Employees per
Square Mile

Employees per
0.10 Square Mile

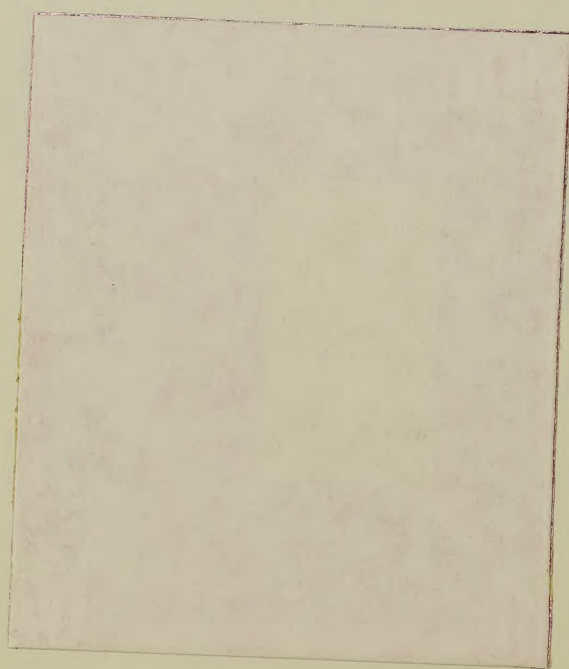


..... PRINCIPAL MANUFACTURING AREAS



FIGURE 1

DISTRIBUTION OF MANUFACTURING EMPLOYMENT



East Hamilton

East Hamilton is the latest stage in the eastward progression of manufacturing activities along the Lake Ontario Plain. With the exception of the Bay Front, this area (see Figure 1) has the greatest potential for future manufacturing employment increase in the Lower City. Significant growth of manufacturing employment here may be attributed to the availability of serviced parcels of industrial land, and accessibility to good road and rail transportation.¹

Manufacturing Areas of the Central City

Proximity to services offered to the manufacturers by C.B.D. functions appears to be a locational advantage of the Central City.² A central location places the industry at the hub of the integral accessibility of Hamilton's labour force as it is served by public transit, and it provides access to a wide range of specialized services. These location factors are often important to small industries "just starting up". A mixture of diverse industries, strongly female oriented and labour intensive, are characteristic of this area. Printers, apparel industries, and ancillary services are common.

In recent years the central city industrial area has experienced an absolute decline in manufacturing employment. Urban renewal activities, lack of space for expansion, functionally and physically obsolete buildings, and the attractiveness of suburban industrial sites are some of the factors that account for the downward shift of employment.

The spatial distribution of manufacturing sites is a pattern of individual industries scattered and intermingled with other urban land uses. This mixture of uses is a constraint to the proper functioning and control of land uses. Residential areas and commercial uses are often subject to noxious effects from manufacturing activities, and industrial uses are restricted in their activities by adjacent residents.

- 1 1970 Industrial Location Survey, Geography Department, University of Waterloo
- 2 David Walker, James Bater, Service Requirements: A Neglected Aspect of Industrial Linkage, Geography Department, University of Waterloo, 1970

Barton Street Area

Manufacturing plants located between Barton Street and the C.N.R. tracks are generally grouped in homogenous blocks separated by residential areas. Many of these residential blocks are solidly residential and the houses are well maintained. The cost of acquiring these blocks for industrial purposes is prohibitive, in the vicinity of \$250,000 - \$300,000 per acre. Although the intermingling of land uses is not as great as in the peripheral areas of the C.B.D., the proximity of manufacturing and residential areas creates an undesirable living environment.¹

Since 1961 this area has not had significant employment changes. Most of the employment is engaged by large plants such as Dominion Glass, Stelco, and Canadian Westinghouse.

These plants occupy structures that have reached a stage of physical and functional obsolescence and future redevelopment or relocation is probable. However, the City's policy to convert the residential enclaves north of Barton Street to restricted manufacturing uses may result in an overall employment increase.

Chedoke Manufacturing Enclave

This manufacturing area is strongly defined and isolated from adjacent residential uses by the railway tracks, and Highway 403. With the exception of Westinghouse and Stelco the industrial activities are marginal and engaged in space extensive activities - building supplies, warehousing, etc. The area's strategic location with respect to transportation facilities - freeway and rail - and the central city makes it an ideal location for prestige industries.

West Hamilton Manufacturing Enclave

This pocket of manufacturing activities consists primarily of light manufacturing establishments. Perimeter effects from the industries are generally not adverse. To the west and south, open space buffer areas separate the industry from residences. However, on the east side of the enclave noxious effects emanating from a chemical plant, and truck traffic penetrating the residential streets has a blighting effect on adjacent residences.

1 1969 Official Plan for the Residential Enclaves North of Barton Street

b. EMPLOYMENT

Distribution of Manufacturing Employment

Most of the City's manufacturing jobs are situated within an irregular contour band of 2,000 or more employees per square mile. The band, which is shown in Figure 1 as a thick brown line, begins in the west harbour area and dips south and west through the centre of the City from where it heads north and east to the east harbour. Within this perimeter band there are several salient features. Generally, the highest densities of manufacturing employment are to be found north of Barton Street. Here, there are three pockets of the most dense manufacturing employment in the City. - i.e. 20,000 plus employees per square mile. These areas are located around Victoria Avenue between Barton Street and the C.N.R. tracks; around Sherman Avenue south of the C.N.R. tracks; and the Dominion Foundries, National Steel Car plants north of Burlington Street. The only other area in the City with as high a manufacturing employment density is the Westinghouse complex in the vicinity of Aberdeen Avenue and the 403.

The balance of the City's manufacturing jobs are to be found in scattered enclaves throughout the Lower City. These relatively distinct nodes of 2,000 or more employees per square mile are to be found south of Main Street at its western extremity; around the 403 and Main Street and the 403 and Aberdeen Avenue interchanges; roughly between Main and Cannon Streets approximately east and west of Wentworth Street; west of Gage Avenue between Main Street and the T.H. & B. tracks; around Barton and Woodward Streets; and in the area bounded by the Centennial Parkway and the Queen Elizabeth Way. Manufacturing employment is also tabulated by Planning District and by Category in Figures 2 and 3.

Manufacturing Employment Change 1961 - 1968

This Figure, depicting manufacturing employment change, graphically describes a seven year interval. The numbers in Figure 5 represent centroidal values (i.e. numbers of employees per tenth of a square mile) and must be multiplied by ten to obtain the employment change per square mile figure. The solid numbers signify employee increases while the dotted numbers are employee decreases. Where numbers are not on a coloured background, the change has been less than 1,000 employees per square mile. A red background for the numbers means that an increase

FIGURE 2

MANUFACTURING EMPLOYMENT BY PLANNING DISTRICT - 1968

PLANNING DISTRICT	EMPLOYMENT ¹		GROSS ACREAGE ² 1968	DENSITY E. /G. A.
	1961	1968		
1	115	1,750	89	20
2	547	661	20	33
3	31,288	43,180	2,050	21
4	375	714	29	25
5	12,744	10,899	232	47
6	7,949	8,159	255	32
7	0	9	1	9
8	78	160	22	7
9	30	100	35	3
TOTAL	53,126	65,632	2,731	
AVERAGE				24

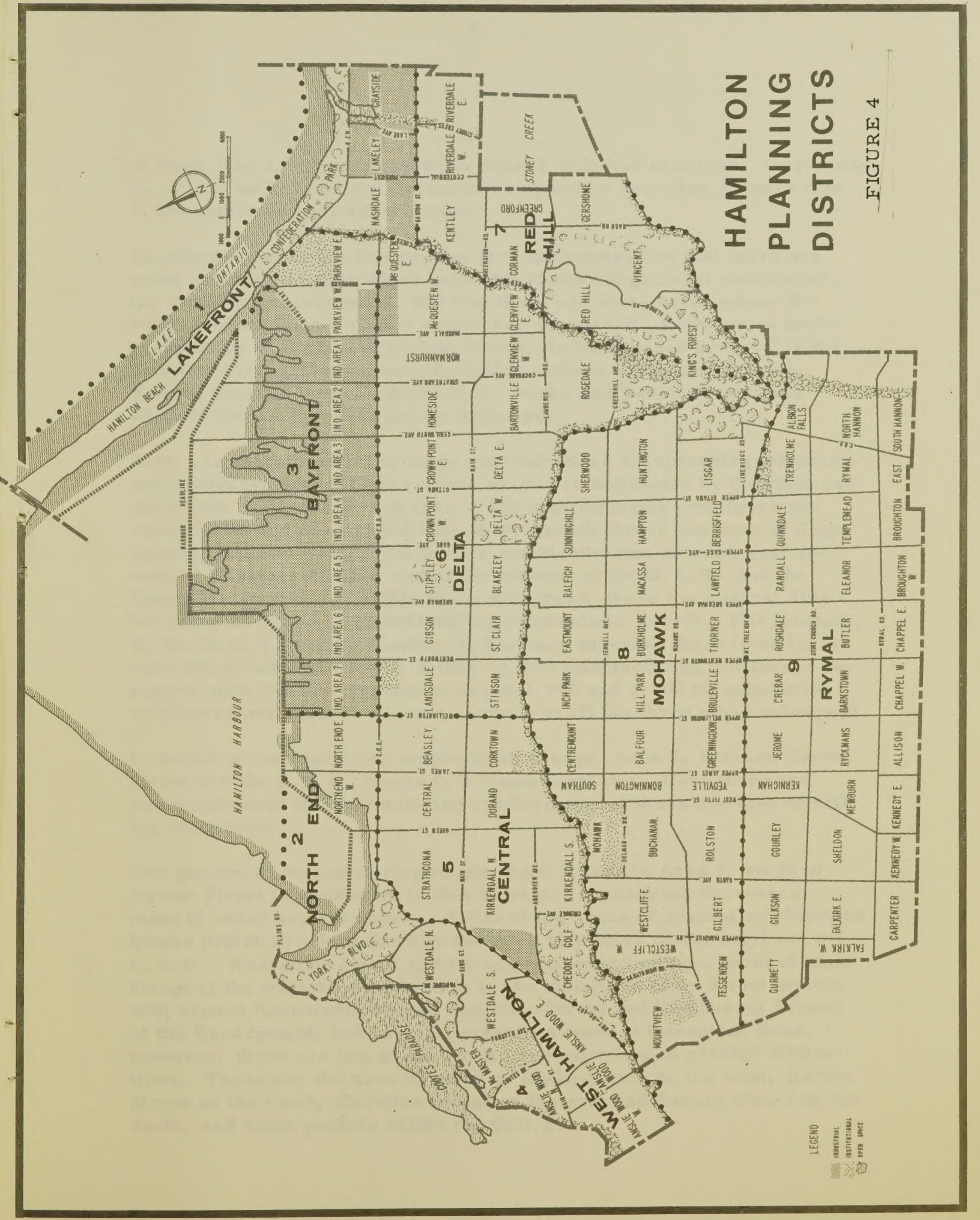
SOURCE: 1 Hamilton Index of Manufacturers

2 Areas are calculated from 1968
planimetric maps

FIGURE 3

MANUFACTURING EMPLOYMENT BY CATEGORY - 1968

MANUFACTURING CATEGORIES	EMPLOYMENT 1968	DENSITY E. /G. A.
Food and Beverage	3,742	49
Textile	3,814	33
Printing	817	30
Primary Metal	24,610	21
Metal Products	8,979	35
Machinery	4,954	23
Transportation	2,298	13
Electrical	5,664	46
Non-Metallic	3,315	16
Chemical	2,245	10
Other	4,936	34
TOTAL	65,374	
AVERAGE		24



HAMILTON PLANNING DISTRICTS

FIGURE 4

LEGEND

- INDUSTRIAL
- INSTITUTIONAL
- OPEN SPACE

of more than 1,000 employees per square mile has occurred. Conversely, a blue background for the numbers depicts a decrease of more than 1,000 employees per square mile.

An examination of the Figure may give the impression that there are some areas of the City which have experienced significant manufacturing employment increases, and that there are many areas where the number of employees in this sector has decreased. However, a better perspective on these antithetical trends can be obtained by dividing the City into three principal manufacturing regions - i.e. north of the C.N.R. tracks; between the C.N.R. tracks and Barton Street; and south of Barton Street to the Escarpment.

Area 1 is characterized by large concentrations of increasing manufacturing employment. These centers which are delineated by the thick red lines have had increases of over 1,000 manufacturing employees per square mile and are located east of Wentworth Street just west of Gage Avenue; between Kenilworth Avenue and Strathearne Avenue; east and west of Parkdale Avenue; and at the junction of the Q.E.W. and the Centennial Parkway. Within these sub-areas, there are several smaller zones of intensive manufacturing employment growth. For instance, in the Q.E.W. and the Centennial Parkway sub-area there is an inner core which has expanded by 8,000 - 9,000 manufacturing employees per square mile and inner growth areas of 2,000 and 3,000 manufacturing employees per square mile are common to all the three other sub-areas.

In terms of manufacturing employment change, Area 2, between Barton Street and the C.N.R. tracks is a transitional one. Here there are some increases in manufacturing employment but there are also offsetting decreases.

The pattern of manufacturing employment change in Area 3, south of Barton Street is consistent in that there are widespread decreases, most of which are not severe. Some of the areas of gradual employment losses (which are delineated by the thick blue lines on the map) are the C.B.D., Wentworth Street and its adjacent surroundings; south of Main Street at the western City Limits; in the vicinity of Main Street and the 403; around Kenilworth Avenue and Main Street and Kenilworth Avenue at the Escarpment; and east of Parkdale Avenue at Queenston Road. However, there are two areas which have experienced greater diminutions. These are the area bounded by Locke Street on the west, Barton Street on the north, Caroline Street on the east and Cannon Street on the south, and some pockets within the C.B.D.

MANUFACTURING EMPLOYMENT CHANGE

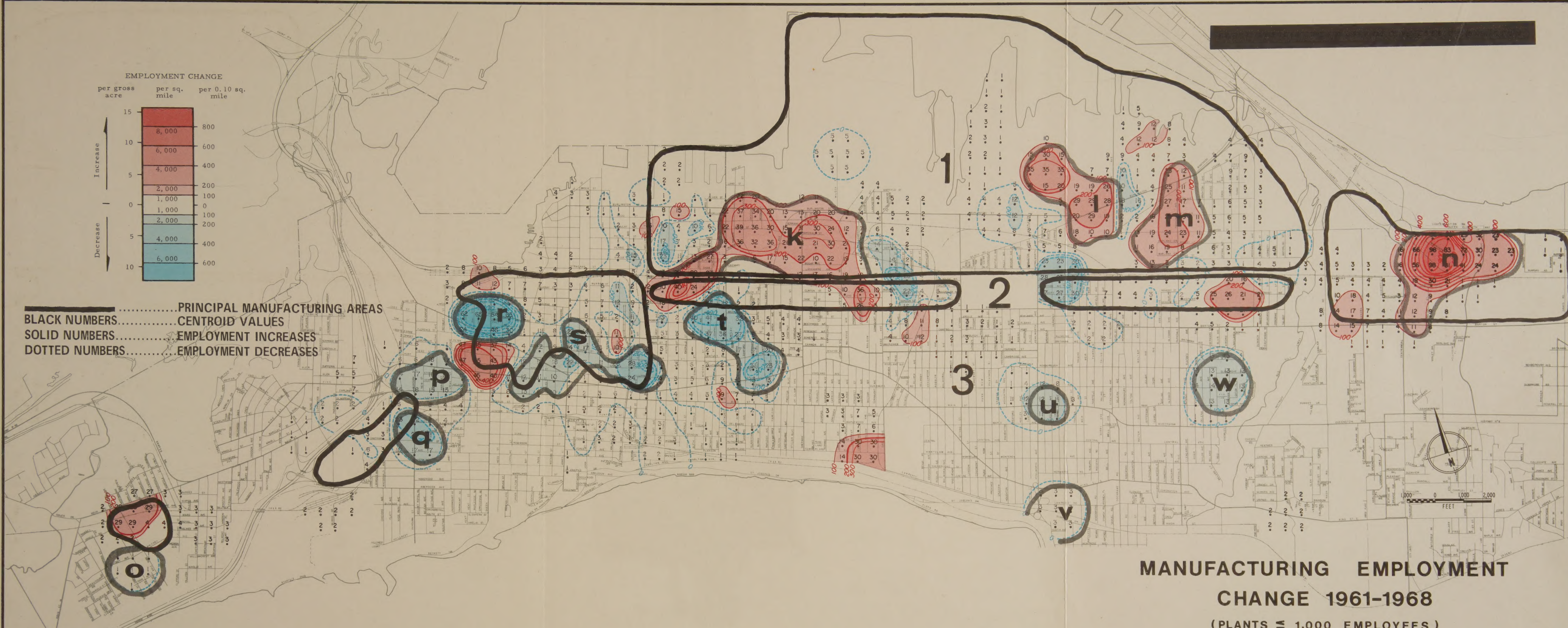
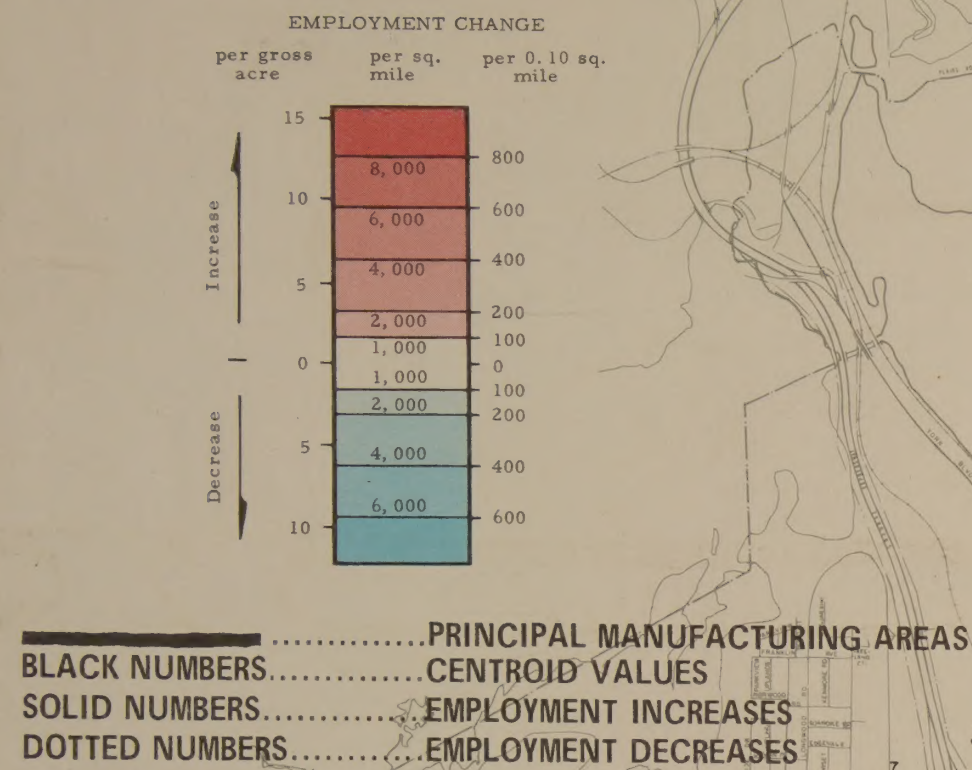
Node Locations

Increases

- (k) Barton Street to Burlington Street and Wellington Street to Gage Avenue
- (l) North of Burlington Street from Kenilworth Avenue
- (m) Parkdale Avenue to Burlington Street
- (n) Barton Street and Highway 20 (Centennial Parkway)

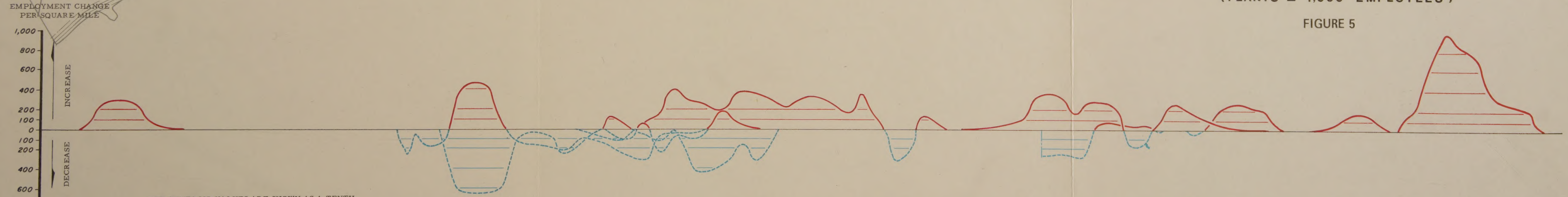
Decreases

- (o) Whitney Avenue and Rifle Range Road
- (p) Main Street and Dundurn Street
- (q) Chatham Street and Dundurn Street
- (r) Queen Street and York Street
- (s) C. B. D.
- (t) Wentworth Street and Cannon Street
- (u) Main Street and Kenilworth Avenue
- (v) Kenilworth Avenue and Lawrence Road
- (w) Queenston Road and Parkdale Avenue



**MANUFACTURING EMPLOYMENT
 CHANGE 1961-1968**
 (PLANTS ≤ 1,000 EMPLOYEES)

FIGURE 5



THE CENTROID VALUES ARE SHOWN AS A TENTH [80(0)] OF THE ACTUAL EMPLOYMENT CHANGE EXPRESSED BY THE CONTOURS.

These decreases are not surprising in the older areas of the Lower City. Here, the adjacent established and entrenched land uses would be a hindrance to firms and plants which would be interested in enlarging their physical facilities. In fact, "lack of space for expansion" and other related deficiencies are cited by the plants surveyed in the 1969 Manufacturing Survey¹ as the chief disadvantages of their locations. Thus, these enterprises would be likely to move out of these more mature areas, possibly out of the City, if they were going to expand.

Exceptions to this pattern of decreases in this third area are few in number, but there are three sub-areas of employment gains - south of Main Street at its western limit; east and west of Queen Street north of Main Street; and west of Gage Avenue at the base of the Escarpment.

c. LAND USE AND TAX BASE

Concern has been expressed that implementation of the proposed neighbourhood plans would decrease employment, assessment and the affected firms would relocate beyond the City Limits. One of the objectives of this Study is to determine the impact of the proposed neighbourhood plans with respect to redesignation of lands which are presently zoned industrial. The Beasley Neighbourhood was selected as the basis for a case study.

Beasley Neighbourhood, one of the developed areas in the Lower City, is a neighbourhood contrast and contradiction. In terms of land use, the north-eastern corner of the neighbourhood, between the C.N.R. mainline and Barton Street, as well as south of Barton Street in the vicinity of a subordinate railroad link and spur are devoted to industrial uses. Between these two extremes lies a broad irregular band of low density housing.

The houses are among the oldest in the City yet their condition is nowhere near the state of dereliction that would justify extensive redevelopment. Intermingled with this housing are a considerable number of industries, warehouses and automobile repair shops. The appearance and operation of these enterprises impinge heavily upon the overall residential character of the Neighbourhood.

1 Manufacturing Survey, City of Hamilton Planning Department, 1969.

Land Use

The present Official Plan was established in 1950. It is reflected by industries which are scattered throughout the Neighbourhood. By zoning the area for industrial purposes, it was hoped that additional industrial development would be attracted - which was not the case. Private industry has failed to respond to this zoning, probably because of prohibitive land cost, as evidenced by the minimal investment in new development over the past 14 years.

The total Neighbourhood gross area is 279 Ac.⁺. The industrial zoned net area is 146.45 Ac.⁺. However only 61.85 Ac.⁺ is used for industrial purposes according to the existing land use map. Predominant zoning in the Neighbourhood remains industrial ("J" and "K"), which provides neither safeguard nor incentive to residential improvement. The present land use is a mixture of residential, commercial, industrial and other uses. These designations have been grouped into seven different categories in Figures 7 and 8, in which the existing and proposed land uses, assessment and employment have been compared.

For the purpose of this case study a Floor Area Ratio of 2 was assumed for commercial development in mixed areas. In the case of office uses, potential employment added could be in the order of 200 persons per acre. However, a conservative figure of 75 persons per acre was assumed.

Through use of the new and expanded commercial-apartment land use designation there is a total potential increase of 9 acres of commercial development. Over 300 new employees and an estimated apartment development potential of about 1,000 units would also be generated.

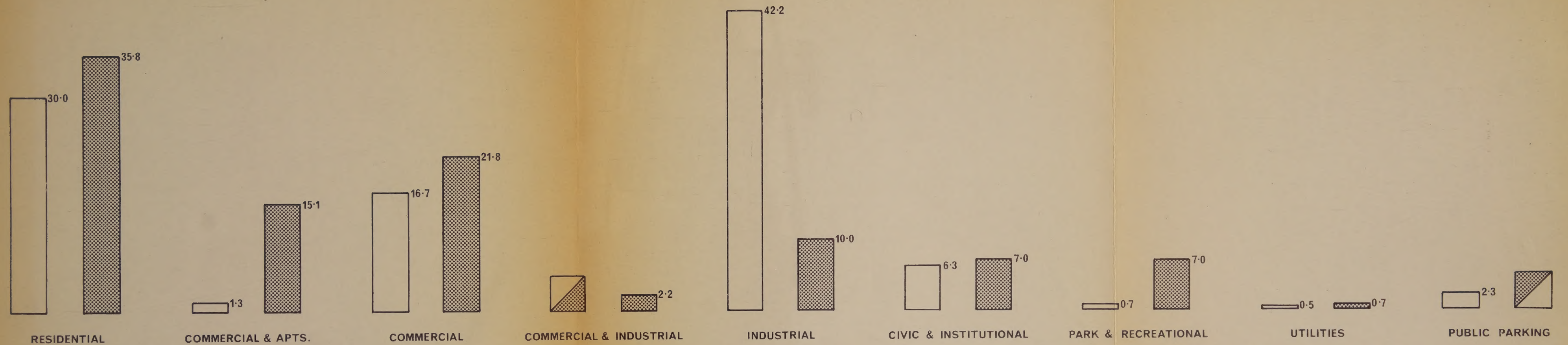
Tax Base

The distribution between residential and non-residential assessment for the City of Hamilton for the past 5 years indicates great consistency. It is evident from Figure 9 that the non-residential assessment is approximately 1% less than it was 7 years previously. The annual percentage increase is slowing down - probably due to urban build-up and a decrease in the serviced land available within the municipal limits.

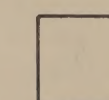
Commercial-residential assessment within the downtown neighbourhoods adjacent to the central core would increase substantially with the stimulus of the new commercial-residential zoning category. This is evident from Figure 8, a case study of Beasley Neighbourhood.

A COMPARISON OF EXISTING & PROPOSED LAND USE DISTRIBUTION BEASLEY NEIGHBOURHOOD

(LAND USES WITHIN EXISTING J & K INDUSTRIAL ZONE BOUNDARIES)



LEGEND



EXISTING LAND USE



FUTURE LAND USE



THE PROPOSED ZONING CATEGORY DOES NOT EXIST UNDER THE PRESENT BY-LAW.



PUBLIC PARKING IS NOT DIFFERENTIATED IN THE PROPOSED PLAN.

CITY OF HAMILTON
PLANNING DEPARTMENT

FIGURE 6

FIGURE 7
REDISTRIBUTION OF EXISTING
INDUSTRIAL AND RESIDENTIAL LAND USES
BEASLEY NEIGHBOURHOOD

<u>EXISTING USE</u>	<u>ACREAGE</u>	<u>PROPOSED USE</u>	<u>ACREAGE</u>	<u>%</u>
Residential	43.98 Ac.	Single Family	30.65 Ac.	69.7%
		Medium Density	0.31 Ac.	0.7%
		High Density	2.94 Ac.	6.7%
		Commercial & Apts.	1.90 Ac.	4.3% 100%
		Commercial	3.88 Ac.	8.8%
		Commercial & Industrial	1.45 Ac.	3.3%
		Industrial	0.18 Ac.	0.4%
		Park & Recreational	2.67 Ac.	6.1%
Industrial	61.85 Ac.	Single Family	5.74 Ac.	9.3%
		Medium Density	3.75 Ac.	6.0%
		High Density	3.88 Ac.	6.3%
		Commercial & Apts.	12.56 Ac.	20.3%
		Commercial	10.32 Ac.	16.7% 100%
		Commercial & Industrial	1.38 Ac.	2.2%
		Industrial	13.86 Ac.	22.4%
		Civic & Institutional	3.88 Ac.	6.3%
		Park & Recreational	6.17 Ac.	10.0%
		Utilities	0.31 Ac.	0.5%

FIGURE 8

A COMPARISON OF EXISTING AND PROPOSED
INDUSTRIAL AND COMMERCIAL LAND USES

(Based on 1971 Assessment and Employment Data)

BEASLEY NEIGHBOURHOOD

	NET	1971	1971	
	LAND ACREAGE	ASSESSMENT	NO. OF EMPLOYEES	
A. INDUSTRIAL AND MANUFACTURING (As of 1971 Assessment Code)				
Existing	14.82	824,630	1,824	
Proposed	9.20	446,810	1,083	
Decrease	5.62	337,820	741	
B. COMMERCIAL AND PROFESSIONAL (As of 1971 Assessment Code)				
Existing	11.54	979,150	524	
Proposed	10.32		469	
Decrease	1.22		55	
C. COMMERCIAL AND INDUSTRIAL (New Land Use Designation)				
Proposed	3.31		166	Employment Ratio 50 P.P.A., Sample From Existing Commercial & Indust-
Increase				rial Uses
D. COMMERCIAL AND APARTMENT (New Land Use Designation)				
Proposed	12.56	6,800,000*	942	Employment Ratio 75 P.P.A.
Increase				
TOTAL	9.03		312	
NET INCREASE				

* Theoretical - assuming full development

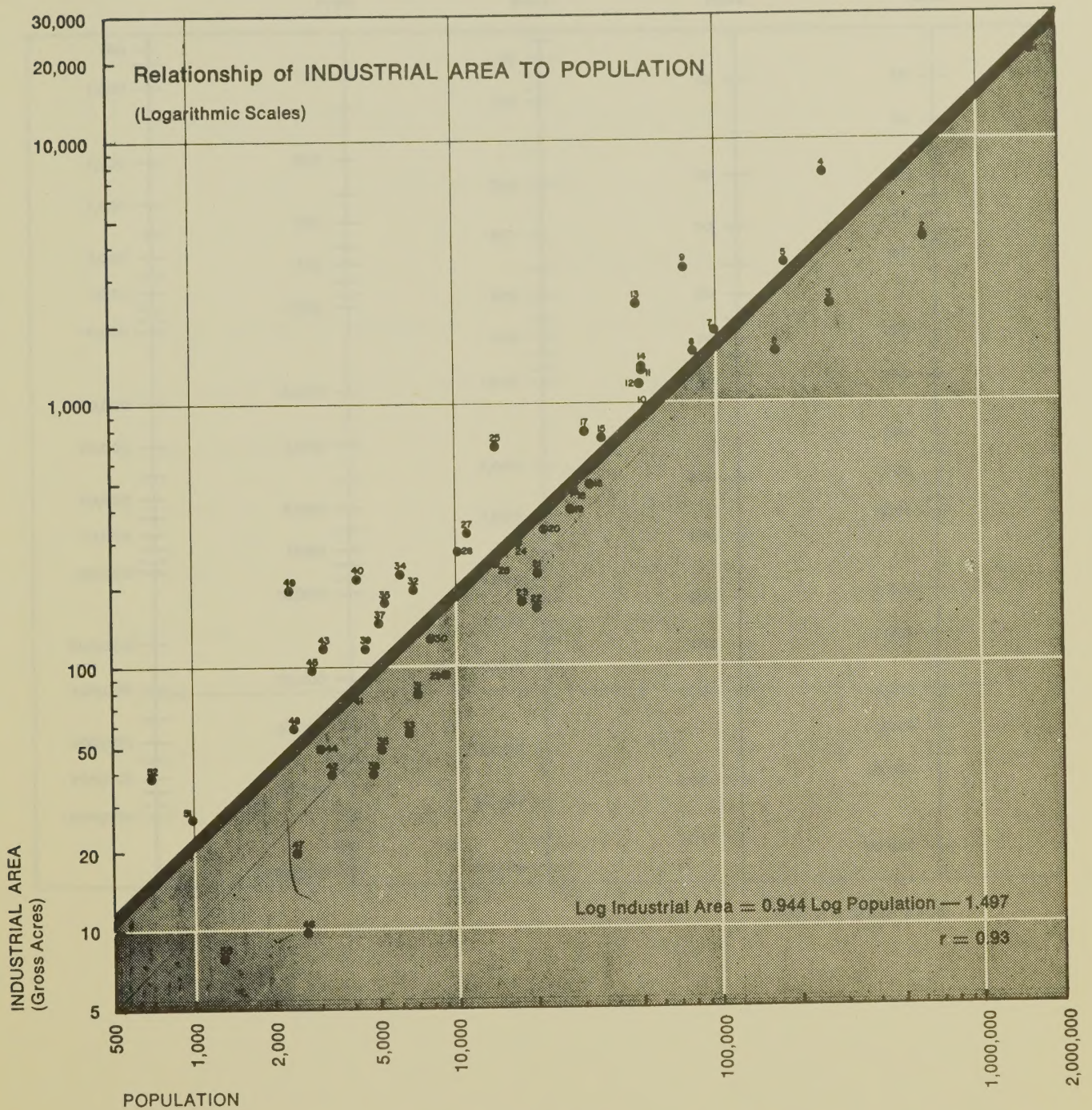
4. COMPARATIVE LAND USE DISTRIBUTION

The relationship between Hamilton's gross industrial acreage and its population is plotted in Figure 10 on a comparative basis with 51 other Ontario municipalities. Dot 4 on the upper right hand corner represents the City of Hamilton.

Industrial acreage was obtained by the authors of the study, (the Research and Special Studies Section of the Provincial Department of Municipal Affairs), from a land use survey which was carried out by the City's Planning Department in 1961. The authors defined the industrial category as including transportation and utilities, giving the City of Hamilton approximately 8,000 gross acres of industrial land. The Figure's 8,000 gross industrial acres actually consists of the sum of two categories from the 1961 Land Use Survey - i.e. 2,628 industrial (gross acres) + 4,979 (gross acres) transportation and utility.

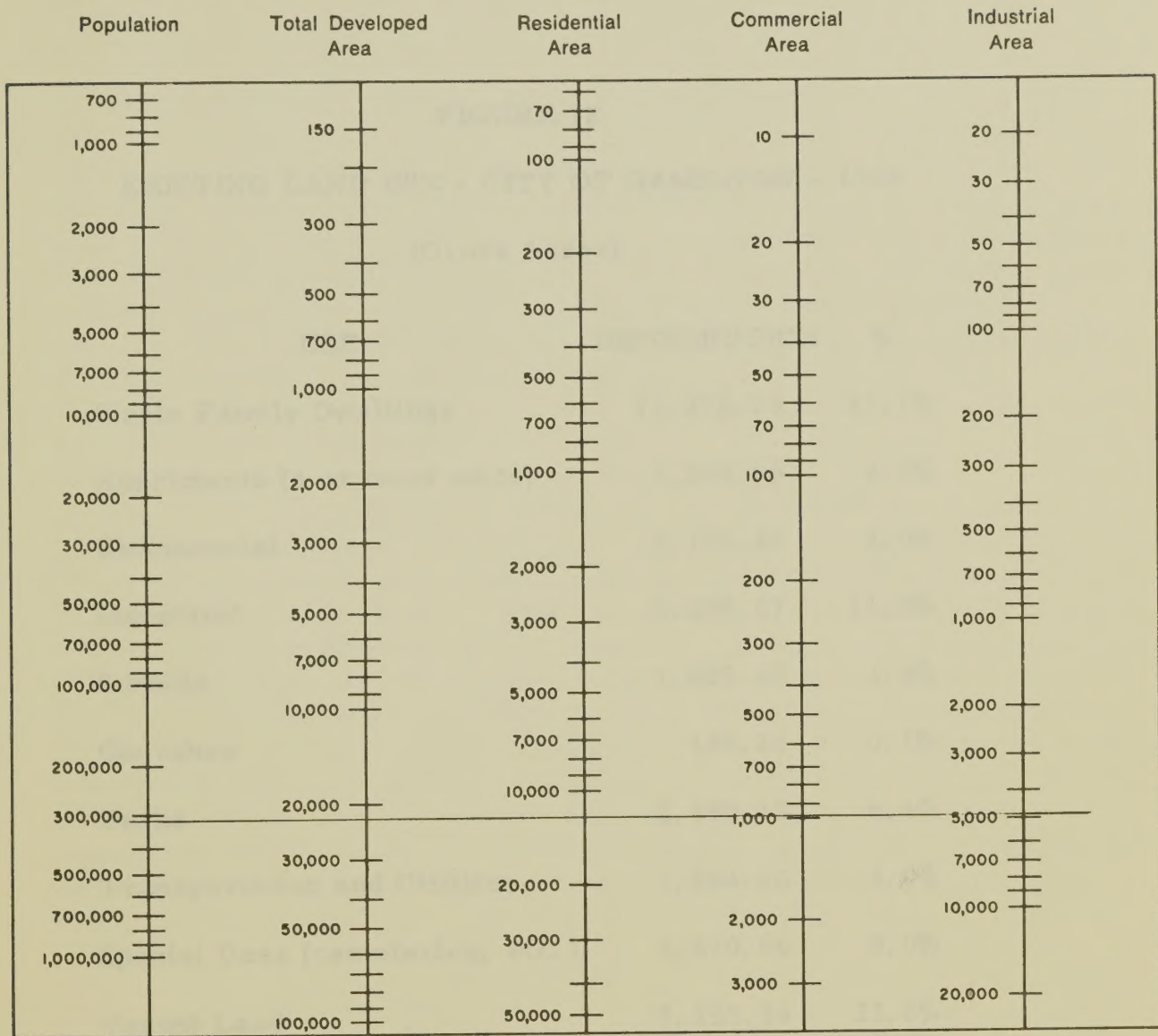
Hamilton's gross industrial acreage is well above the regression line. The City has more gross industrial acres than any other Ontario City of between 100,000 and 1,000,000 population. This means that Hamilton has more acres devoted to this use than Windsor (which is also above the regression line), London, Ottawa and the City of Toronto (which are below the regression line).

Land use areas in Ontario urban municipalities, Figure 11, attempts to relate population to gross acreages for types of land uses. The chart was constructed from the regression lines plotted for each land use area to population relationship. The horizontal line $1/4$ from the bottom of the chart indicates urban land use distribution under 5 headings. According to this nomograph, a city the size of Hamilton with a population of slightly more than 300,000 should have a little more than 20,000 gross acres of total developed area. Of this total, more than 10,000 gross acres should be in residential uses, about 1,000 gross acres in commercial uses, and slightly less than 5,000 gross acres should be used for industrial purposes. When acreage for transportation, utilities and vacant industrial land are added to the industrial acreage indicated in Figure 12, the land use distribution for the City of Hamilton compares favourably with the norm at this time.



SOURCE: URBAN LAND USE IN ONTARIO

LAND USE AREAS* IN ONTARIO'S URBAN MUNICIPALITIES



*Areas in gross acres

SOURCE: URBAN LAND USE IN ONTARIO

FIGURE 12

EXISTING LAND USE - CITY OF HAMILTON - 1968

(Gross Acres)

USE	DISTRIBUTION	%
Single Family Dwellings	11, 270.78	37.1%
Apartments (4 or more units)	1, 265.96	4.2%
Commercial	1, 193.45	3.9%
Industrial	3, 598.07	11.8%
Schools	1, 027.37	3.4%
Churches	187.23	0.1%
Parks	1, 950.15	6.4%
Transportation and Utilities	1, 204.00	4.0%
Special Uses (cemeteries, etc.)	1, 510.66	5.0%
Vacant Land	7, 159.94	23.6%
TOTAL	30, 367.61	99.5%

5. INDUSTRIAL LAND REQUIREMENTS

The amount of serviced industrial land required within the City of Hamilton has been predicted in the short and long term by many groups, each using a somewhat different approach. Several of these projections, most of which are employment based, are included in this section of the report. Lithwick's labour forecasts provide the basis for both the Hamilton Transportation Study and Planning Department predictions of Hamilton's industrial land requirements.

a. LITHWICK FORECAST

Labour force is predicted for the Metro-Hamilton area at 10 year intervals between the years 1971 - 2001 by Lithwick. The figures in the following table were extrapolated from the economist's preferred labour force projections (N4) which is based upon the System Research Group's estimates of changes in output per person in each of 13 economic sectors. These projections for the local metropolitan area conform to Lithwick's and the Economic Council of Canada's posited trend of a rapid expansion in the labour intensive service industries. The author anticipates further automation and decentralization of Hamilton's steel industry with diversification - development of a more complex and sophisticated economic structure. Accordingly, his forecast indicates a greater increase in the number of service jobs than in the number of manufacturing jobs, although the number of jobs in both sectors will rise.

FIGURE 13

INDUSTRIAL EMPLOYMENT - METRO HAMILTON

(1970 - 2001)

	TOTAL EMPLOYMENT	MFG.	% OF TOTAL	SERVICES	% OF TOTAL
1971	203, 000	79, 000	+16.0%	98, 000	+53.0%
1981	280, 000	101, 000	+28.0%	150, 000	+56.0%
1991	396, 000	129, 000	+28.0%	234, 000	+60.0%
2001	574, 000	165, 000	+28.7%	374, 000	+65.0%

On the basis of this forecast which utilized 1961 Census data, in 1971 the 79,000 manufacturing jobs would comprise 38.9% of the Metro-Hamilton job market and the 98,000 service jobs would represent 48.2% of the area's jobs. By 2001, in contrast, the 374,000 service sector jobs are expected to be 65% of the employment total. Thus Lithwick's figures seem to demonstrate a local application of this current and continuing national pattern. The indications are that a proportionately larger share of the total number of jobs in this area or regional will be in the service sector and a proportionately smaller number of regional jobs will be available in the manufacturing field.

b. HAMILTON ECONOMIC DEVELOPMENT COMMISSION

The Commission, "Estimates conservatively that an industrial City the size of Hamilton should have available approximately 500 acres of serviced industrial land in 3 or 4 different locations, with a backlog of 500 acres of unserviced land which would be serviced gradually as the serviced lands are sold". This estimate, based both on solicited and unsolicited enquiries, indicates a current market for a minimum of 100 acres of land zoned for light industrial ("J") and 175 acres for heavy industrial ("K") uses.

c. HAMILTON TRANSPORTATION STRATEGY STUDY

Although the Transportation Study has not been published, it contains the most recent look at future population and the associated employment requirements for a target population of 1,000,000 at or near the year 2001. The Lithwick Report "Urban Canada - Problems and Prospects", provided the basic population and employment projections on which the Transportation Study is based. However, there have been some modifications.

Population and Employment

In the last twenty year period Metro-Hamilton enjoyed an average population growth of 2.5% per annum. Total employment with an annual increase of 2 - 2.5% during the ten year period kept in step with the population increase. The composition of employment, however, has changed. While manufacturing employment grew by 16% from 1961 to 1971, employment in trade increased 41%, business and personal services increased 56%; the financial, insurance and real estate sector increased 69%. These figures indicate a shift in relative importance towards the tertiary and quaternary sectors, with manufacturing's share of industrial employment

FIGURE 14

EMPLOYMENT BY TYPE
(YEAR 2001 METRO-HAMILTON)

<u>EMPLOYMENT CATEGORY</u>	<u>TOTAL 1969-</u>	<u>TOTAL 2001+</u>	<u>INCREMENT</u>
Manufacturing & Wholesale	85,350	131,240	45,890
Retail	21,657	45,920	24,263
Service	54,551	296,673	242,122
Other	442	984	542
TOTAL	162,000	470,947	308,947

FIGURE 15

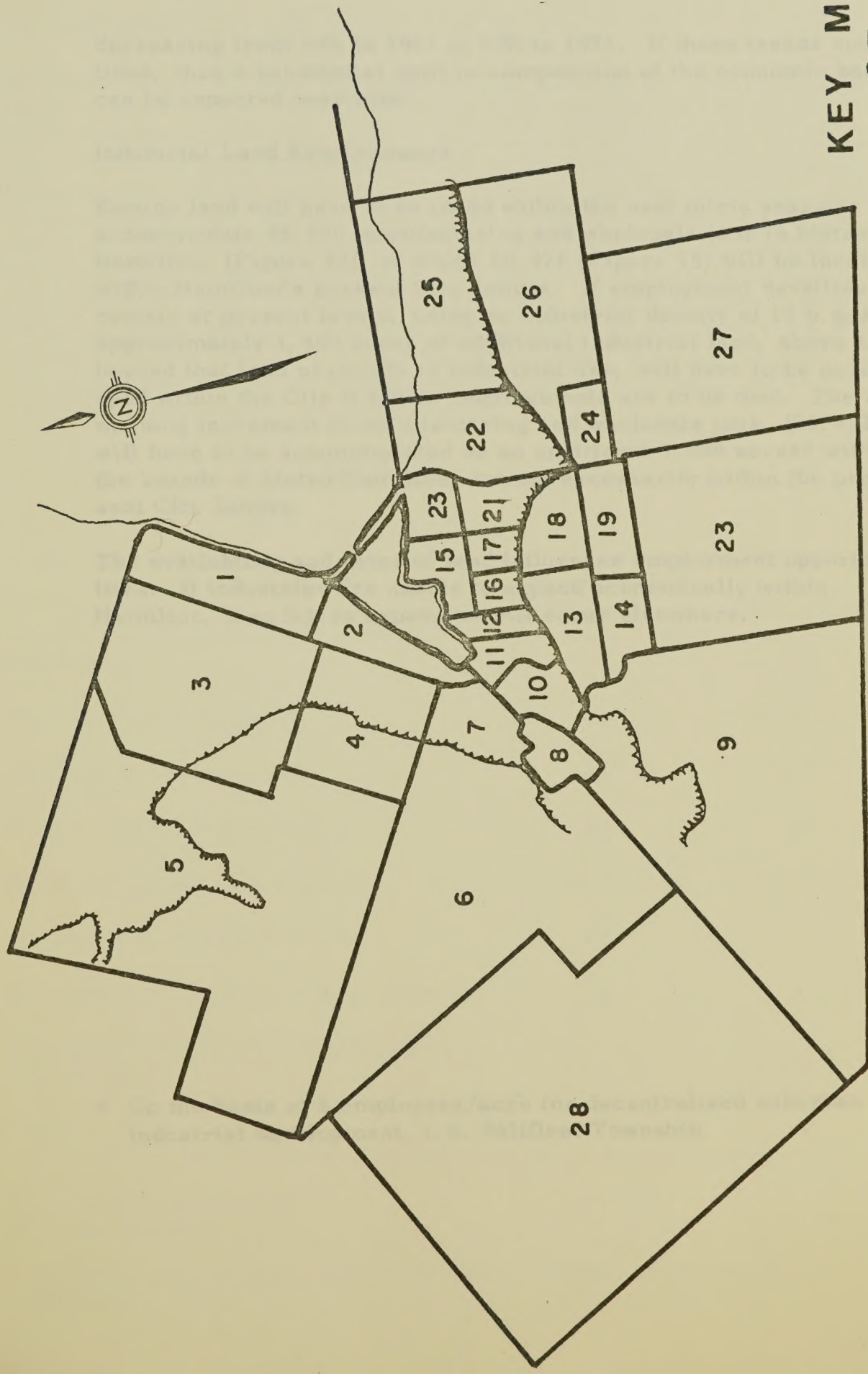
INDUSTRIAL EMPLOYMENT
(YEAR 2001 HAMILTON CITY)

<u>EMPLOYMENT CATEGORY</u>	<u>TOTAL 1971*</u>	<u>TOTAL 2001+</u>	<u>INCREMENT</u>
Manufacturing & Wholesale	62,393	82,871	20,478
TOTAL	126,791	282,065	155,791

- Toronto Area Regional Model Study 1969

+ Hamilton Transportation Strategy Study

* Hamilton Employment Survey, 1971 (Hamilton Planning Department)



KEY MAP OF SUPER ZONES

SOURCE: HAMILTON TRANSPORTATION STRATEGY STUDY

decreasing from 64% in 1961 to 59% in 1971. If these trends continue, then a substantial shift in composition of the economic base can be expected over time.

Industrial Land Requirements

Enough land will have to be found within the next thirty years to accommodate 45,890 manufacturing and wholesale jobs in Metro-Hamilton, (Figure 14), of which 20,478 (Figure 15) will be located within Hamilton's present City Limits. If employment densities remain at present levels, using an industrial density of 15 p.p.a., approximately 1,400 acres of additional industrial land, above and beyond that land presently in industrial use, will have to be developed within the City if future requirements are to be met. The remaining increment in manufacturing and wholesale jobs, (25,412) will have to be accommodated on an additional 3,000 acres* within the bounds of Metro Hamilton, but not necessarily within the present City Limits.

The availability and price of land influences employment opportunities. If industries are unable to expand economically within Hamilton, then future expansion will occur elsewhere.

* On the basis of 8 employees/acre for decentralized suburban industrial development, i. e. Saltfleet Township.

6. INDUSTRIAL LOCATION FACTORS

In 1969 a survey of some 88 manufacturing plants in the City was undertaken by the Planning Department in co-operation with the Economic Development Commission. The purpose of this survey was to determine the attitudes and opinions of manufacturing executives with regard to the patterns and characteristics of the City's manufacturing industry. The 53 plants with 1,000 or fewer employees which responded to this question in the Manufacturing Survey¹ listed constraints in site conditions as the chief general site disadvantage. On site drawbacks such as lack of space for expansion, shortage of parking space and inadequate loading facilities were pointed out respectively by 45%, 19% and 9% of the responding firms. Poor site locations which conflict with nearby land uses, and poor accessibility to transportation facilities were stressed by 25% and 19% of the respondents respectively.

FIGURE 17

SITE DISADVANTAGES

	NUMBER OF*	PER CENT**
	PLANTS	
Land Cost	3	6
Poor Access to Buildings	5	9
Shortage of Parking Space	10	19
Lack of Space for Expansion	24	45
Inadequate Loading Facilities	5	9
Conflict with Nearby Land Uses	13	25
Air Pollution or other Noxious Effects	2	4
Poor Accessibility to Transportation Facilities	10	19
Other	5	9

* 53 Plants responded

** Approximated

1 Manufacturing Survey, City of Hamilton Planning Department, September 1969.

FIGURE 18

ADVANTAGES OF A HAMILTON LOCATION

	NUMBER OF*	PER CENT**
	PLANTS	
Taxes	0	0
Municipal Services	2	4
Community Relations	5	9
Proximity to Markets	39	71
Proximity to Materials	10	18
Transportation Facilities	13	24
Ambitious Industrial Promotion	1	2
Community Factors - University, etc.	2	4
Labour - Productivity, Skills, Supply	14	25
Ancillary Industrial, Manufacturing Services	2	4
Established here, Services and Products Known Here	6	11

* 55 Plants responded

** Approximated

The 55 respondents to this portion of the Manufacturing Survey questionnaire all have 1,000 or fewer employees. Among these industries, 2 general factors (location and labour supply) were overwhelmingly cited as Hamilton's major advantages. Transportation related advantages such as "Proximity to Markets, Transportation Facilities and Proximity to Materials" were chosen by 71%, 24% and 18% of the responding plants, respectively. The availability of skilled labour was a locational asset to 25% of these firms.

No other categories received these levels of preference. Among the other categories, the biggest responses were for "Established Here, Services and Product Became Known and Community Relations" which garnered 11% and 9% respectively.

7. STOCK OF INDUSTRIAL LAND

a. HAMILTON

A lack of City-owned industrial parkland in Hamilton limits the expansion of existing companies and restrains promotion of the City as a location for new companies, according to a recent report of Hamilton's Economic Development Commission.

City-Owned

An inventory of serviced City-owned industrial acreage by the Commission indicates that no land in Heavy Industrial ("K" zoning) and in Light Industrial ("J" zoning) remain. The following land is available in Grayside #2 Industrial Park, shown in Figure 24

Restricted Heavy Industrial ("KK" zoning)	Restricted Light Industrial ("JJ" zoning)	Total Acreage
7.8 acres @ \$15,000/acre	1.0 acres @ \$15,000/acre	8.8 acres

It is anticipated that an additional 76 to 100 acres of serviced land zoned Restricted Heavy ("KK") and Restricted Light ("JJ") Industrial located in the Mountain Industrial Park will be marketable in late 1973 or early 1974

Privately Owned

The Hamilton Economic Development Commission inventory also indicates availability of the following privately owned, vacant, serviced land, shown by number in Figures 19 and 20

FIGURE 19

PRIVATELY OWNED AVAILABLE INDUSTRIAL LAND 1972

NO.	J	JJ	K	KK	PRICE
1. Nash & Barton			3		\$75, 000 (25, 000/ac.)
2. 2451 Barton St. E.		1.333			\$105, 000
3. Morley & Brampton	2				\$58, 500 (24, 250/ac.)
4. 2416 Barton St. E.		2			\$86, 000 (43, 000/ac.)
5. Gray's Rd. (Home Juice)				5	\$125, 000 (25, 000/ac.)
6. 1842 Burlington St. E.			1		\$75, 000 (75, 000/ac.)
7. Lake Av. (N. of Barton)		12			\$300, 000 (25, 000/ac.)
8. Curtis & South Service Rd.		4			\$60, 000 (25, 000/ac.)
TOTALS					
					2 19.3 4 5
GRAND TOTAL					30.5 acres

A total of 500 acres of privately owned, serviced land in the built-up areas within the Residential Enclaves North of Barton Street, illustrated in Figures 22 and 23, can be assembled at approximately \$250 - 300, 000/ acre and converted to industrial use.

b. OTHER MUNICIPALITIES

A comparison of industrial acreage available within other selected municipalities in Central and Western Ontario (competitors for new industry) by the Commission shows the following:

LEGEND



Privately owned vacant serviced

Publicly owned vacant serviced

Privately owned serviced in built-up area

15,750,000 N

15,750,000 N

15,750,000 N

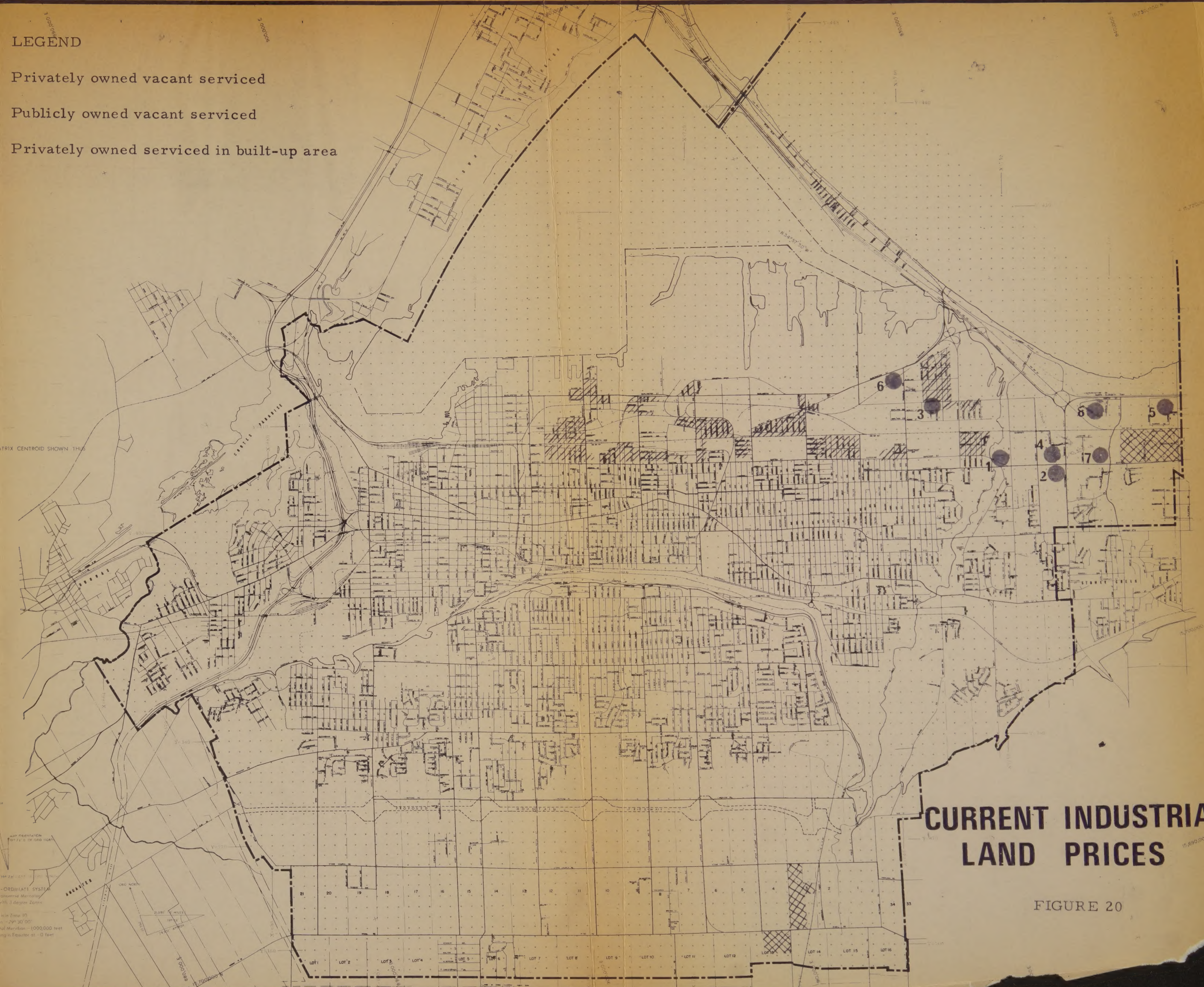
15,750,000 N

MATRIX CENTROID SHOWN THIS

15,750,000 N

ONTARIO CO-ORDINATE SYSTEM
Based on Transverse Mercator
Projection with 3 degree Zones
This Map uses the Zone 18
Central Meridian - 79° 30' 00"
Existing at Central Meridian - 1980,000 feet
Origin of Northing is Equator at - 10 feet

15,750,000 N



CURRENT INDUSTRIAL LAND PRICES

FIGURE 20



FIGURE 21

SELECTED MUNICIPALITIES IN SOUTHERN ONTARIO
AVAILABLE INDUSTRIAL ACREAGE 1971

CITY	CITY-OWNED	PRIVATELY OWNED
Brantford	232 serviced 343 not serviced	n/a
Burlington	310 serviced	175
Galt	514 serviced	40
Guelph	200 serviced	n/a
HAMILTON	9 serviced 170 unserviced	32 serviced
Kitchener	275 serviced	n/a
London	893 serviced	n/a
Mississauga	nil	500 serviced 150
Niagara Falls	145 serviced	152
Oakville	32 not serviced	183
Oshawa	149 serviced 300 partly serviced 490 not serviced	180
St. Catharines	65 n/a	nil
Windsor	300 staged development	1,100 serviced

This Table shows that, with the exception of St. Catharines and possibly Oakville, the City of Hamilton has less industrial acreage available than any of the other cities surveyed - all of which are substantially smaller than Hamilton. In all of these communities with a population of 100,000 or less, 200 or more acres of fully serviced industrial lands are available at the present time. The City of Hamilton, with a population exceeding 300,000, has only 43 acres of serviced municipally owned industrial land. That acreage is in one development, giving a potential new industry no choice of location.

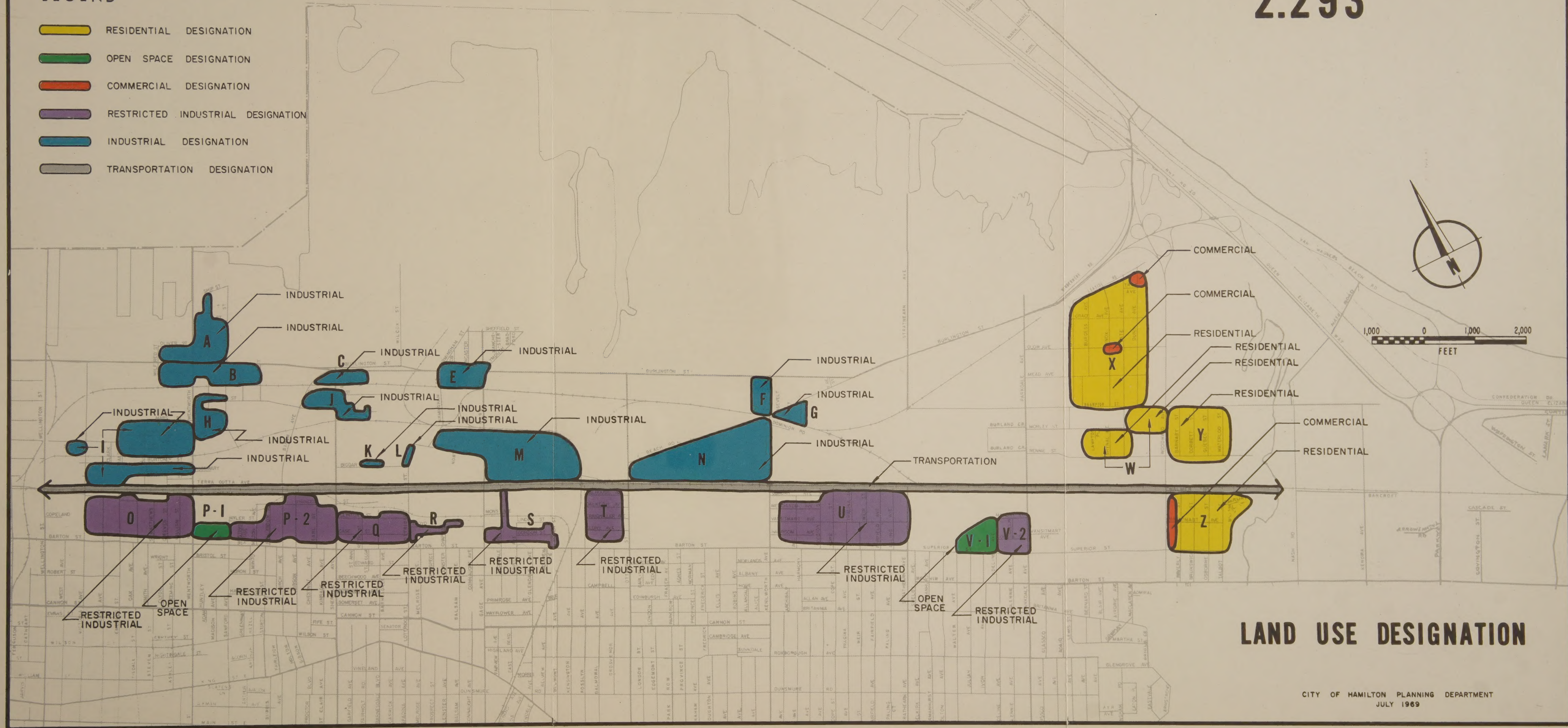
OFFICIAL PLAN 1969 FOR THE RESIDENTIAL ENCLAVES
NORTH OF BARTON STREET

SCHEDULE

2.293

LEGEND

- RESIDENTIAL DESIGNATION
- OPEN SPACE DESIGNATION
- COMMERCIAL DESIGNATION
- RESTRICTED INDUSTRIAL DESIGNATION
- INDUSTRIAL DESIGNATION
- TRANSPORTATION DESIGNATION



LAND USE DESIGNATION

OFFICIAL PLAN 1969 FOR THE RESIDENTIAL ENCLAVES
NORTH OF BARTON STREET

SCHEDULE

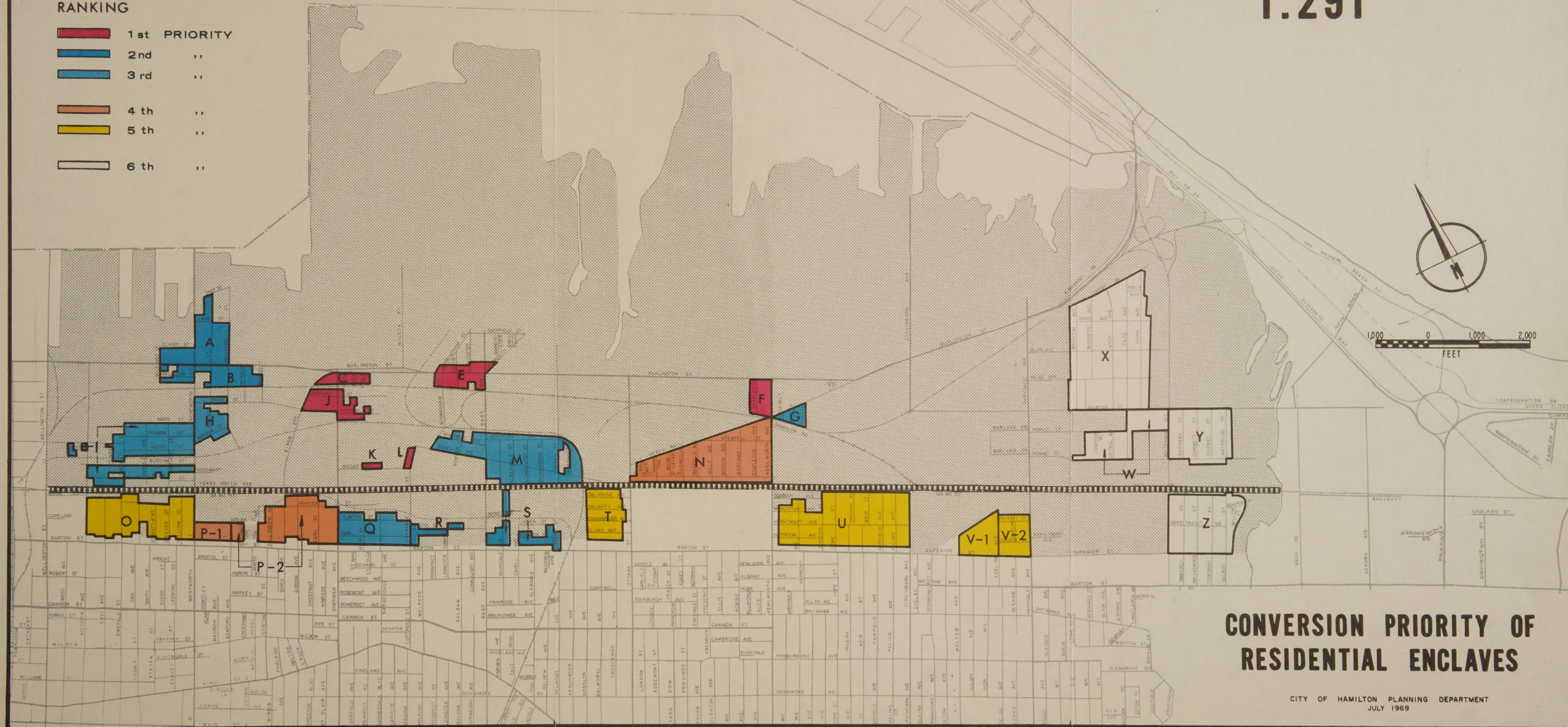
1.291

MAIN C.N.R. TRACKS

INDUSTRIAL LAND USES

RANKING

- 1st PRIORITY
- 2nd "
- 3rd "
- 4th "
- 5th "
- 6th "



CONVERSION PRIORITY OF
RESIDENTIAL ENCLAVES

CITY OF HAMILTON PLANNING DEPARTMENT
JULY 1969

8. STRATEGY AND POLICY RECOMMENDATIONS

It is recommended that:

1. the current trend - a shift in Hamilton's economic base from manufacturing to service industry - be recognized by municipal policy. Relative decreases in industrial employment and assessment should be offset by increases in commercial employment and assessment.
2. the programme of industrial land acquisition in approved industrial locations be expanded and expedited - to assure an adequate supply at an economic price.
3. new transit modes and their implementation be studied with a view toward improving access to new and existing industrial development. Large acreages now required for employee parking will be released for industrial development.
4. multiple residential be introduced into the Downtown neighbourhoods to expand the traditional role of Downtown as a strong commercial and business centre for the region and provide a range of housing types conveniently accessible to the Harbour Industrial area, accommodating persons from many income levels.
5. to improve service to industry and increase the viability of downtown neighbourhoods:
 - (i) a truck bypass route be developed between industrial areas in the North End and Hwy. 403.
 - (ii) redirect rail linkages to industry exterior to rather than through residential neighbourhoods.
6. Official Plan policies with respect to the acquisition and clearance of residential enclaves, part of the "Official Plan 1969 for the Residential Enclaves North of Barton Street" - with the exception of modifications established by approved neighbourhood plans - be implemented.
7. applications be made to the Federal and Provincial Governments for subsidy to assist in the segregation of incompatible residential and industrial uses.
8. new industrial expansion be directed to the following areas shown in Figure 24:
 - a) north of the C.N.R. between Wellington and Parkdale
 - b) north of Barton, east of the Red Hill Creek

c) Mountain Industrial Park

Except for special circumstances, other uses will not be permitted in these areas.

9. the small isolated pockets at the following locations, indicated in Figure 24, will be retained for new and expanding industries although adequate buffers will be established between the industry and adjacent uses:
 - (i) Ainslie Wood Industrial Park
 - (ii) Kirkendall Industrial Park
 - (iii) the industrial sectors established in Approved Neighbourhood Plans.
10. isolated industrial uses in Downtown and other parts of the City (whether conforming or nonconforming) be reviewed individually and gradually converted to more compatible uses taking the following factors into account:
 - (i) the nuisance and incompatibility of the present use
 - (ii) the functional obsolescence of the structure on site
 - (iii) the possibility of structures being utilized for other more compatible uses
 - (iv) the possibility of economic and satisfactory relocation
11. controls be established to improve compatibility with adjacent uses (with or without a request for a change or extension of use) by means of techniques such as:
 - (i) Site Plan requirements
 - (ii) Licencing requirements
 - (iii) Minimum Property Standards

and the Committee of Adjustment.
12. an industrial market study be undertaken to determine industry's requirements, the demand and feasibility of municipally owned or leased industrial:

(i) Industrial Investment Fund

Except for special circumstances, where cases will not be permitted to arise.

2. The small fund will be set up at the following locations, indicated in 2.1.1.2. It will be subject to the law and regulatory measures, although separate rules will be established between the industry and different states.

(ii) Atlantic Wind Industrial Fund

(iii) Renewable Industrial Fund

(iv) The industrial sector selected in Appendix 2, Renewable Fund.

10. Industrial Investment Fund: The fund will be set up at the following locations, indicated in 2.1.1.2. It will be subject to the law and regulatory measures, although separate rules will be established between the industry and different states.

(i) The industrial sector selected in Appendix 2, Renewable Fund.

(ii) The industrial sector selected in Appendix 2, Renewable Fund.

(iii) The industrial sector selected in Appendix 2, Renewable Fund.

(iv) The industrial sector selected in Appendix 2, Renewable Fund.

11. Renewable Investment Fund: The fund will be set up at the following locations, indicated in 2.1.1.2. It will be subject to the law and regulatory measures, although separate rules will be established between the industry and different states.

(i) The Renewable Investment Fund

(ii) Renewable Investment Fund

(iii) Renewable Investment Fund

and the Commission's objectives.

12. An industrial sector will be set up at the following locations, indicated in 2.1.1.2. It will be subject to the law and regulatory measures, although separate rules will be established between the industry and different states.

- (i) land banks
- (ii) factories or malls
- (iii) warehousing

with a view to utilizing land and buildings acquired in the residential enclaves to provide primarily for industries which are being encouraged to relocate due to Neighbourhood Plan implementation, acting also as incubator plants for small industry.

13. phasing of Neighbourhood Plan implementation in the Lower City be co-ordinated with opening of the Mountain Industrial Park and/or municipal industrial malls.
14. installation of municipal services to the Mountain Industrial Park be expedited due to the shortage of serviced industrial land. Only 8.8 acres of serviced municipally-owned land are now available within Hamilton's City Limits and approximately 1,400 acres will be required by the year 2001 (as indicated on pages 32 and 29 of this report).
15. in the long term, major industrial expansion be decentralized and channelled to industrial parks, with direct access to peripheral freeways on the Mountain, accessible by mass transit, yet buffered from residential development.



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